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(12) **United States Patent**  
**Stimac**(10) Patent No.: **US 6,403,085 B1**  
(45) Date of Patent: **\*Jun. 11, 2002**(54) **METHODS AND FORMULATIONS FOR CONTROL OF PESTS**(75) Inventor: **Jerry L. Stimac, Gainesville, FL (US)**(73) Assignee: **University of Florida Research Foundation, Inc., Gainesville, FL (US)**

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(63) Continuation-in-part of application No. 08/654,504, filed on May 28, 1996, now Pat. No. 6,254,864, which is a continuation of application No. 08/210,965, filed on Mar. 21, 1994, now Pat. No. 5,683,689, which is a continuation-in-part of application No. 07/999,185, filed on Dec. 30, 1992, now abandoned, which is a continuation of application No. 07/687,362, filed on Apr. 18, 1991, now abandoned, application No. 08/210,965, which is a continuation-in-part of application No. 07/999,186, filed on Dec. 30, 1992, now abandoned, which is a continuation of application No. 07/687,361, filed on Apr. 18, 1991, now abandoned.

(51) Int. Cl.<sup>7</sup> ..... **A01N 69/00**(52) U.S. Cl. .... **424/93.5; 424/404; 424/405; 424/439; 424/442; 424/499; 424/493; 424/489; 435/254.1; 504/117**(58) Field of Search ..... **424/93.5, 404, 424/405, 439, 442, 499, 493, 489; 504/117; 435/254.1**(56) **References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—Leon B. Lankford, Jr.

(74) Attorney, Agent, or Firm—Saliwanchik, Lloyd &amp; Saliwanchik

(57) **ABSTRACT**

The subject invention concerns novel biopesticides and their use to control cockroaches, carpenter ants, and pharaoh ants. Specifically, highly virulent isolates of *Beauveria bassiana* in an agricultural composition, can be used to effectively control these pests. Exemplified are *Beauveria bassiana* No. 447, ATCC 20872, and *Beauveria bassiana* Sp111, ATCC 74038. Also described are unique formulations which are highly effective for delivering biocontrol agents to target pests. By using these novel compositions, target pests can be controlled without the environmental and public safety hazards presented by chemical control agents.

**20 Claims, 11 Drawing Sheets**